

TOSHIBA TRANSISTOR SILICON NPN EPITAXIAL TYPE (PCT PROCESS)

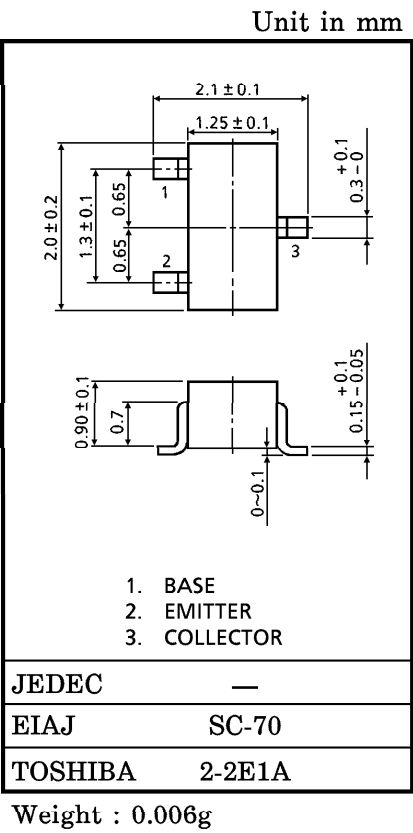
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FOR MUTING AND SWITCHING APPLICATIONS

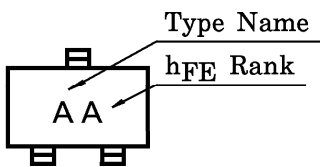
- High Emitter-Base Voltage : $V_{EBO}=25V$ (Min.)
- High Reverse h_{FE} : Reverse $h_{FE}=150$ (Typ.)
($V_{CE}=-2V$, $I_C=-4mA$)
- Low On Resistance : $R_{ON}=1\Omega$ (Typ.) ($I_B=5mA$)
- High DC Current Gain : $h_{FE}=200\sim1200$
- Small Package

MAXIMUM RATINGS (Ta = 25°C)

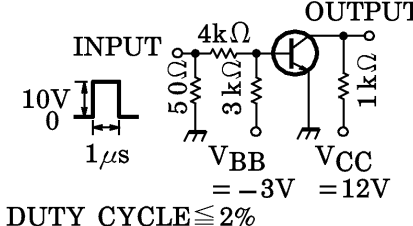
CHARACTERISTIC	SYMBOL	RATING	UNIT
Collector-Base Voltage	V_{CBO}	50	V
Collector-Emitter Voltage	V_{CEO}	20	V
Emitter-Base Voltage	V_{EBO}	25	V
Collector Current	I_C	300	mA
Base Current	I_B	60	mA
Collector Power Dissipation	P_C	100	mW
Junction Temperature	T_j	125	°C
Storage Temperature Range	T_{stg}	-55~125	°C



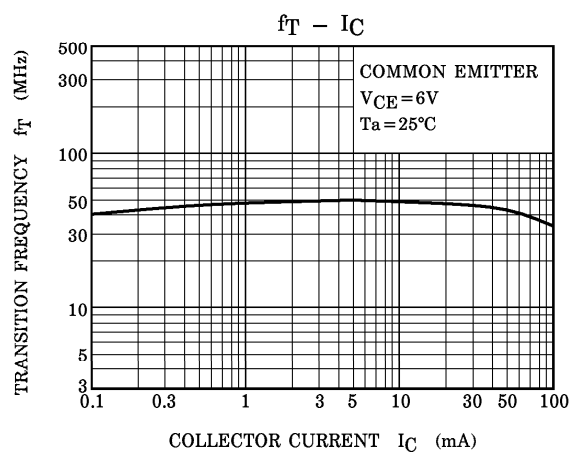
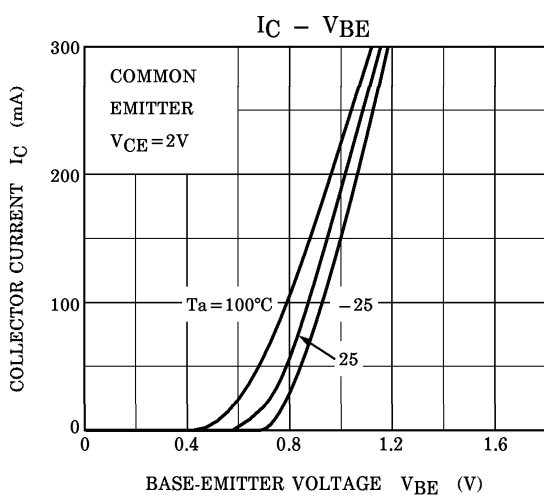
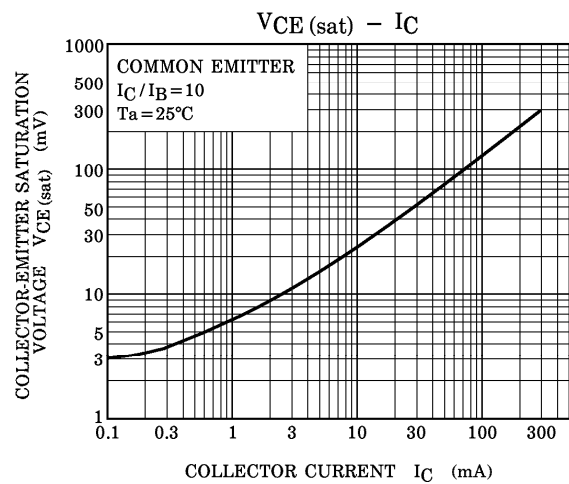
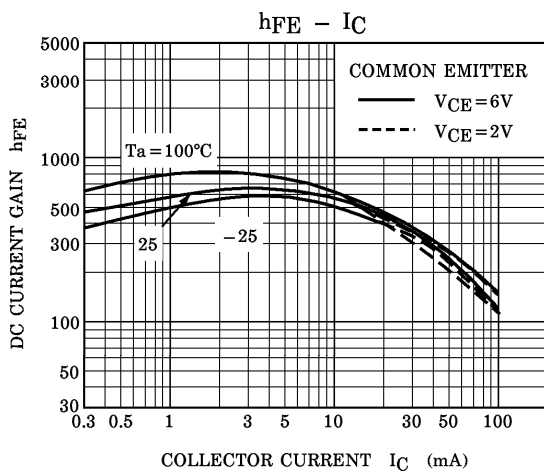
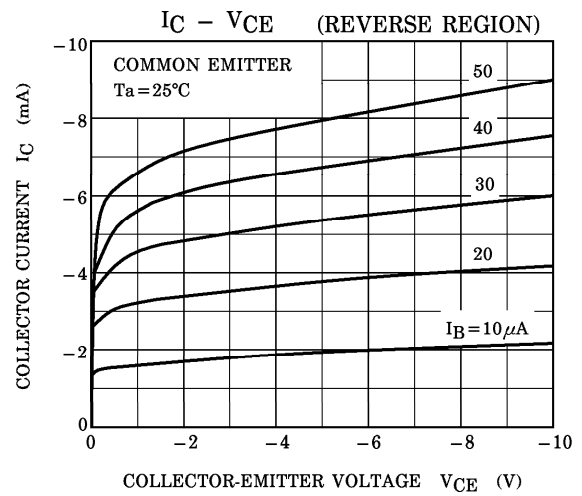
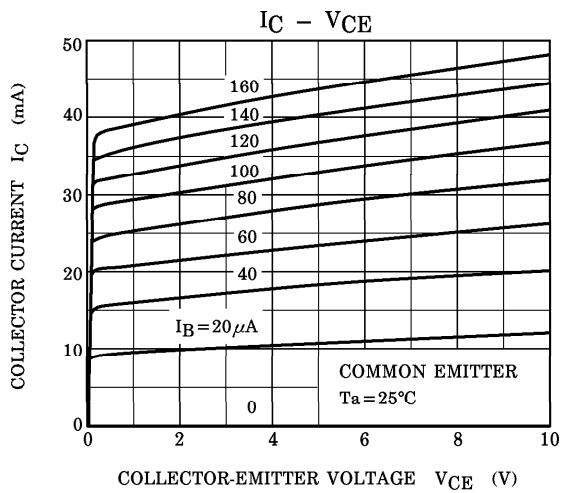
MARKING

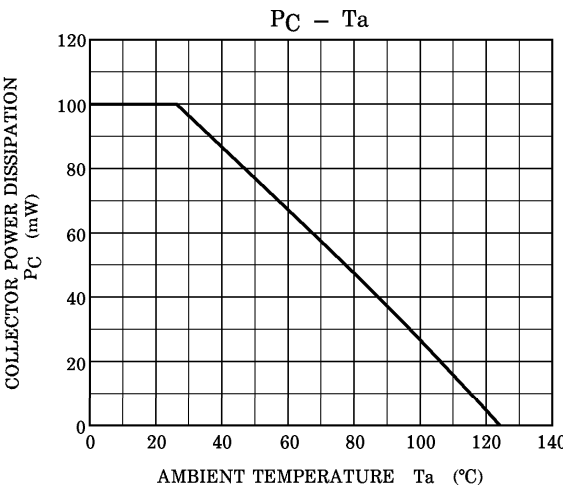
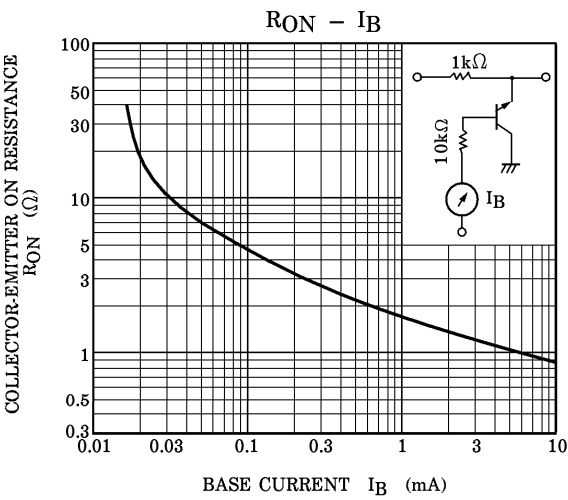
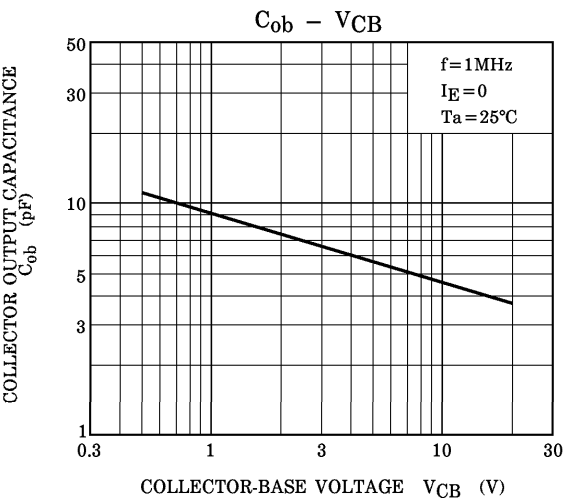


ELECTRICAL CHARACTERISTICS (Ta = 25°C)

CHARACTERISTIC		SYMBOL	TEST CONDITION	MIN.	TYP.	MAX.	UNIT
Collector Cut-off Current		ICBO	V _{CB} = 50V, I _E = 0	—	—	0.1	μA
Emitter Cut-off Current		IEBO	V _{EB} = 25V, I _C = 0	—	—	0.1	μA
DC Current Gain		h _{FE} (Note)	V _{CE} = 2V, I _C = 4mA	200	—	1200	
Collector-Emitter Saturation Voltage		V _{CE (sat)}	I _C = 30A, I _B = 3mA	—	0.042	0.1	V
Base-Emitter Voltage		V _{BE}	V _{CE} = 2V, I _C = 4mA	—	0.61	—	V
Transition Frequency		f _T	V _{CE} = 6V, I _C = 4mA	—	30	—	MHz
Collector Output Capacitance		C _{ob}	V _{CB} = 10V, I _E = 0, f = 1MHz	—	4.8	7	pF
Switching Time	Turn-on Time	t _{on}	 DUTY CYCLE ≤ 2%	—	160	—	ns
	Storage Time	t _{stg}		—	500	—	
	Fall Time	t _f		—	130	—	

(Note) : h_{FE} Classification A : 200~700, B : 350~1200





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